# CURRICULUM MAP

**Subject:** Math **Grade:** 4TH **Quarter:** 3rd

**Teacher(s)**: 4th Grade

| Month | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 |
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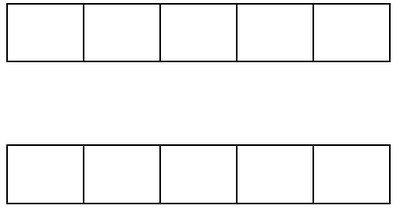
| Concept (CCSS Standards)<br>*Italic Information: Recursive standard – repeated in at least one other quarter*<br>**BOLD information: Standards that should be emphasized** | **4.NF.2** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.<br>**DOK 2: Compare the two fractions by showing <, =, > (without a model).**<br>**4/5_____2/8**<br>**DOK 3: Put these fractions in order from least to greatest.**<br>**1/3, 5/6, 1/8, 4/6, 5/8**<br>*4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.* | **4.NF.3a** Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.<br>**DOK 1: Using fraction strips, tell how many 1/10 make a whole. 4.NF.3a DOK 1: 1/10+2/10=3/10 5/10-3/10=2/10**<br>**DOK 2: Model how to add 1/5 + 1/5**<br>  <br>**DOK 3: Jamie ate one-sixth of a pie, and his friend Miles ate two-sixth of the pie. How much of the pie did they eat all together? Show your work with a model and number sentence.**<br>**4.NF.3b** Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. | **4.NF.3c** Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.<br>**DOK 1: 3 3/4 - 1 1/4 =_____**<br>**DOK 2: Kristen bought 8 1/4 yards of ribbon. She used 6 2/4 yards of ribbon on a project. How many yards did she have left?**<br>**DOK 3: Denny played video games for 1 1/2 hours, worked on math problems for 2 1/2 hours, and practiced the piano for 1/2 an hour. How much time did he spend completing all these activities?**<br>**4.NF.3d** Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.<br>**DOK 1: There are 12 flowers in a vase. 5 of them are roses, 2 are tulips, and 5 are daisies. Which equation shows the total number of roses in the vase?**<br>**DOK 2: Ava cut a cake into 8 pieces. She ate 2 pieces before lunch and one piece after lunch. Use a diagram to show the total number of pieces of cake she ate that day.**<br>**DOK 3: Model: Natalie and Amy are having a turtle race. Natalie's turtle reached the finish** | **4.MD.5.a** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.<br>**DOK 1: Classify the following angles. What is the measurement of the shaded portion of the following angles?**<br>Draw a 90 degrees see file<br>180 degrees see file | **4.MD.5.b** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: b. An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees. |

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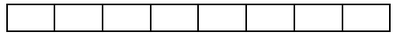
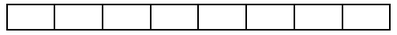
| | | **DOK 1: Fill in the missing fraction**<br><br>**3/6 = 1/6 + ?/?**<br><br>**DOK 2: Model how to decompose 4/8 into two parts and show your work with a number sentence.**<br><br>  <br><br>  <br><br>**DOK 3: Charline has a garden divided into 6 parts. Show how she can plant corn, beans, and squash in her garden equally. How many parts of the garden are just corn?** | **line, while Amy's turtle crawled 4/6 of the way then stopped for a nap. Show the turtles finishing positions on a number line. How much farther will Amy's turtles have to go to finish the race?** | | |
| ***VOCABULARY*** | **Key Vocabulary**<br><br>common denominator, mixed number, improper fraction, proper fraction | Fractions<br>Numerators<br>Denominator<br>Common fractions<br>Decimal fraction<br>Equivalent<br>Numerator<br>Denominator<br>Improper<br>Mixed number<br>Simplest form<br>Simplify | **Key Vocabulary**<br><br>common denominator, mixed number, improper fraction, proper fraction | angle, ray, endpoint, vertex, degree, protractor, acute angle, obtuse angle, right angle, perpendicular lines | angle, ray, endpoint, vertex, degree, protractor, acute angle, obtuse angle, right angle, perpendicular lines |
| Assessment<br><br>Resources: | **GDOE CURRICULUM MAP: Resources & Links to Technology**<br><br>• Adding Fractions Using Circles<br><br>• Adding Fractions Using Number Lines<br><br>• Another Online Fraction Strip Interactive model that can be used to show equivalence<br><br>• http://www.youtube.com/watch?v=pMSZnmwbKOw<br><br>• This video extends into using visuals to add with unlike denominators. You can use this to extend the learning for those students that are ready. | **Common formative assessment pg. 637-657 of CCSS Workbook**<br><br>Chapter 11 - Adding and Subtracting Fractions Essential Questions<br><br>**GDOE CURRICULUM MAP: Resources & Links to Technology**<br><br>• Adding Fractions Using Circles<br><br>• Adding Fractions Using Number Lines<br><br>• Another Online Fraction Strip Interactive model that can be used to show equivalence | **Common formative assessment pg. 637-657 of CCSS Workbook**<br><br>**GDOE CURRICULUM MAP: Resources & Links to Technology**<br><br>• Adding Fractions Using Circles<br><br>• Adding Fractions Using Number Lines<br><br>• Another Online Fraction Strip Interactive model that can be used to show equivalence<br><br>• http://www.youtube.com/watch?v=pMSZnmwbKOw<br><br>• This video extends into using visuals to add with unlike denominators. You can use | **Orange Mathematics Plus Chapter 9 Pg. 268- 290**<br><br>**Resources & Links to Technology**<br><br>• Illustrative Mathematics An online resource with sample items that can be used in class or for assessment<br><br>NCTM Illuminations Online tools that can be used by teachers and students to reinforce concepts<br><br>**Mathematics Plus (orange book): Textbook**<br><br>**Formal: Chapter Review Test pp. 310-311 / Pretest, Postest pp. 274F, 290, 314, 315**<br><br>**Performance: Portfolio pp. 274, 285, 289,** | **Resources & Links to Technology**<br><br>Illustrative Mathematics An online resource with sample items that can be used in class or for assessment<br><br>NCTM Illuminations Online tools that can be used by teachers and students to reinforce concepts<br><br>**Mathematics Plus (orange book): Textbook**<br><br>**Formal: Chapter Review Test pp. 310-311 / Pretest, Postest pp. 274F, 290, 314, 315**<br><br>**Performance: Portfolio pp. 274, 285, 289, 297, 310, 312,313**<br><br>• **What did I learn? (Interview/task** |

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| ESSENTIAL QUESTIONS | • How do we add fractions with like denominators?<br>• How do we sum unit fractions?<br>• How do we simplify fractions?<br>• How do we add and subtract mixed numbers and improper fractions?<br>• How do we solve word problems involving mixed numbers and improper fractions? | • How do we add fractions with like denominators?<br>• How do we sum unit fractions?<br>• How do we simplify fractions?<br>• How do we add and subtract mixed numbers and improper fractions?<br>• How do we solve word problems involving mixed numbers and improper fractions? | • How do we add fractions with like denominators?<br>• How do we sum unit fractions?<br>• How do we simplify fractions?<br>• How do we add and subtract mixed numbers and improper fractions?<br>• How do we solve word problems involving mixed numbers and improper fractions? | **Essential Question(s):**<br>What are the variety of situations that angles can be presented? | **Essential Question(s):**<br>What are the variety of situations that angles can be presented? |

| Month<br>_____ | WEEK 6<br>_____ | WEEK 7<br>_____ | WEEK 8<br>_____ | Instructional Strategies (District)<br>_____ | Instructional Strategies (District)<br>_____ |
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| Concept (CCSS Standards) | **4.MD.6** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.<br><br>See file for DOK (2nd week) | **4.MD.7** Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.<br><br>SEE FILE FOR DOK | *TESTING/ REVIEW*<br><br>**Big Idea** 1: Students will compare fractions by creating visual fraction models or finding common denominators or numerators.<br><br>**Big Idea** 2: Students will understand that geometric figures can be analyzed and classified based on their properties, such as having parallel lines, particular angle measures, and symmetry. | **Mathematical Practices**<br><br>Make sense of problems and persevere in solving them: Working with fractions and mixed numbers can be challenging for students. As they work through the concepts and skills in this Big Idea, they will learn to persevere through challenging problems (MP 1).<br><br>Model with mathematics: Students use fraction models to help understand fractions and later explain their reasoning as they work with fraction problems (MP 4).<br><br>Attend to precision: While precision in calculations is only one part of this standard, it is important that students work carefully through the problems and ensure their solutions are complete and reasonable (MP 6). | **Mathematical Practices**<br><br>Model with mathematics: The use of models, both concrete and drawn representations, help students understand the concepts in this Big Idea (MP 4).<br><br>Use appropriate tools strategically: In addition to any student-made tools, students will also use protractors to measure angles. This is an important skill that students will begin to develop in this grade (MP 5).<br><br>Attend to precision: As students learn to measure angles, it is important to point out that a small difference in measuring an angle can turn into a large difference in a large angle. It is important to measure carefully and state measurements accurately (MP.6) |

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| Vocabulary | angle, ray, endpoint, vertex, degree, protractor, acute angle, obtuse angle, right angle, perpendicular lines | angle, ray, endpoint, vertex, degree, protractor, acute angle, obtuse angle, right angle, perpendicular lines | | **1. Make sense of problems and persevere in solving them.**<br><br>2. Reason abstractly and quantitatively.<br><br>3. Construct viable arguments and critique the reasoning of others.<br><br>**4. Model with mathematics.**<br><br>5. Use appropriate tools strategically.<br><br>**6. Attend to precision.**<br><br>7. Look for and make use of structure.<br><br>8. Look for and express regularity in repeated reasoning. | |
| Assessment /Resources | **Resources & Links to Technology**<br><br>Illustrative Mathematics An online resource with sample items that can be used in class or for assessment<br><br>NCTM Illuminations Online tools that can be used by teachers and students to reinforce concepts<br><br>http://theteacherscafe.com/teaching-4-md-c-5-a-b-understand-angles-and-concepts-of-angle-measurement/<br><br>**Mathematics Plus (orange book): Textbook**<br><br>**Formal: Chapter Review Test pp. 310-311 / Pretest, Postest pp. 274F, 290, 314, 315**<br><br>**Performance: Portfolio pp. 274, 285, 289, 297, 310, 312,313**<br><br>• **What did I learn? (Interview/task test) pp 312**<br><br>• **What students know p. 274**<br><br>• **What students learned p. 310** | **Resources & Links to Technology**<br><br>Illustrative Mathematics An online resource with sample items that can be used in class or for assessment<br><br>NCTM Illuminations Online tools that can be used by teachers and students to reinforce concepts<br><br>http://theteacherscafe.com/teaching-4-md-c-5-a-b-understand-angles-and-concepts-of-angle-measurement/<br><br>**Mathematics Plus (orange book): Textbook**<br><br>**Formal: Chapter Review Test pp. 310-311 / Pretest, Postest pp. 274F, 290, 314, 315**<br><br>**Performance: Portfolio pp. 274, 285, 289, 297, 310, 312,313**<br><br>• **What did I learn? (Interview/task test) pp 312**<br><br>• **What students know p. 274**<br><br>• **What students learned p.** | **Resources & Links to Technology**<br><br>Illustrative Mathematics An online resource with sample items that can be used in class or for assessment<br><br>NCTM Illuminations Online tools that can be used by teachers and students to reinforce concepts | | |

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| | **Integrated: Wrap up questions in Teacher Edition for every lesson.** | **310**<br><br>**Integrated: Wrap up questions in Teacher Edition for every lesson.** | | | |
| ESSENTIAL QUESTIONS | **Essential Question(s):**<br><br>What are the variety of situations that angles can be presented? | **Essential Question(s):**<br><br>What are the variety of situations that angles can be presented? | **Essential Question(s):**<br><br>What are the variety of situations that angles can be presented? | | |